

IUBMB Enzyme Nomenclature

EC 2.7.1.137

Common name: phosphatidylinositol 3-kinase

Reaction: ATP + 1-phosphatidyl-1D-*myo*-inositol = ADP + 1-phosphatidyl-1D-*myo*-inositol 3-phosphate

For diagram [click here](#).

Other name(s): 1-phosphatidylinositol 3-kinase; type III phosphoinositide 3-kinase; Vps34p; type I phosphatidylinositol kinase

Systematic name: ATP:1-phosphatidyl-1D-*myo*-inositol 3-phosphotransferase

Comments: One mammalian isoform is known.

Links to other databases: [BRENDA](#), [EXPASY](#), [KEGG](#), [WIT](#), CAS registry number: 115926-52-8

References:

1. Whitman, M., Downes, C.P., Keeler, M., Keller, T. and Cantley, L. Type I phosphatidylinositol kinase makes a novel inositol phospholipid, phosphatidylinositol-3-phosphate. *Nature* 332 (1988) 644-646. [PMID: [2833705](#)]
2. Vanhaesebroeck, B., Leeyers, S.J., Ahmadi, K., Timms, J., Katso, R., Driscoll, P.C., Woscholski, R., Parker, P.J. and Waterfield, M.D. Synthesis and function of 3-phosphorylated inositol lipids. *Annu. Rev. Biochem.* 70 (2001) 535-602. [PMID: [11395417](#)]

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